

<b>RESOLUTION / RECOMMENDATION</b>	<b>S U P</b>	<b>M O D</b>	<b>N O C</b>	<b>N O C</b>	<b>NOTES</b>	<b>OTHER</b>	<b>BR and OTHER SOURCES</b>
1 610.6-1 613.8 MHz and 1 660-1 660.5 MHz between the mobile-satellite service and the radio astronomy service							
RESOLUTION 132 (WRC-97) Use of the bands 18.8-19.3 GHz and 28.6-29.1 GHz by networks operating in the fixed-satellite service			X				
RESOLUTION 136 (Rev. WRC-03) Frequency sharing in the range 37.5-50.2 GHz between geostationary fixed-satellite service networks and non-geostationary fixed-satellite service systems	X						WRC-10 Agenda Item 2.5
RESOLUTION 139 (WRC-2000) Use of FSS systems for the provision of direct-to-home television broadcasting			X				
RESOLUTION 140 (WRC-03) Measures and studies associated with the equivalent power flux-density (epfd) limits in the band 19.7-20.2 GHz			X				
RESOLUTION 141 (WRC-03) Sharing between certain types of non-geostationary satellite systems in the fixed-satellite service and stations in the fixed service in the 17.7-19.7 GHz band					Pending decisions of WRC-07		WRC-07 Agenda Item 1.18
RESOLUTION 142 (WRC-03) Transitional arrangements			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
relating to use of the frequency band 11.7-12.2 GHz by geostationary-satellite networks in the fixed-satellite service in Region 2							
RESOLUTION 143 (WRC-03) Guidelines for the implementation of high-density applications in the fixed-satellite service in frequency bands identified for these applications			X				
RESOLUTION 144 (WRC-03) Special requirements of geographically small or narrow countries operating earth stations in the fixed-satellite service in the band 13.75-14.0 GHz	X						
RESOLUTION 145 (WRC-03) Potential use of the bands 27.5-28.35 GHz and 31-31.3 GHz by high altitude platform stations (HAPS) in the fixed service	X				Consequential to WRC-07 Agenda Item 1.8		
RESOLUTION 146 (WRC-03) Transitional arrangements for the application of modified provisions of Appendix 30B			X				
RESOLUTION 205 (Rev.Mob-87) Protection of the band 406-406.1 MHz allocated to the mobile-satellite service			X				
RESOLUTION 207 (Rev. WRC-			X				

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03) Unauthorized use of frequencies in the bands allocated to the maritime mobile service and to the aeronautical mobile (R) service							
RESOLUTION 212 (Rev.WRC-97) Implementation of International Mobile Telecommunications-2000 (IMT-2000)			X				
RESOLUTION 215 (Rev.WRC-97) Coordination process among mobile-satellite systems and efficient use of the allocations to the mobile-satellite service in the 1-3 GHz range			X				
RESOLUTION 217 (WRC-97) Implementation of wind profiler radars			X				
RESOLUTION 221 (Rev. WRC-03) Use of high altitude platform stations providing IMT-2000 in the bands 1885-1980 MHz, 2010-2025 MHz, 2110-2170 MHz in Regions 1 and 3 and 1885-1980 MHz and 2110-2160 MHz in Region 2			X				
RESOLUTION 222 (WRC-2000) Use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite service			X				WRC-10 Agenda Item 2.3

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RESOLUTION 223 (WRC-2000) Additional frequency bands identified for IMT-2000					Further analysis needed		
RESOLUTION 224 (WRC-2000) Frequency bands for the terrestrial component of IMT-2000 below 1 GHz					Further analysis needed		
RESOLUTION 225 (Rev. WRC- 03) Use of additional frequency bands for the satellite component of IMT-2000					Further analysis needed		
RESOLUTION 228 (Rev. WRC- 03) Studies on frequency-related matters for future development of IMT-2000 and systems beyond IMT-2000 as defined by ITU-R					Pending decisions of WRC-07 under agenda item 1.4		WRC-07 Agenda Item 1.4
RESOLUTION 229 (WRC-03) Use of the bands 5150-5250 MHz, 5250-5350 MHz, and 5470-5725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks					Further analysis needed		
RESOLUTION 230 (WRC- 03) Consideration of mobile allocations for wideband aeronautical telemetry and associated telecommand	X				Consequential to WRC-07 Agenda Item 1.5		WRC-07 Agenda Item 1.5
RESOLUTION 331 (Rev. WRC- 03) Transition to the Global Maritime Distress and Safety System (GMDSS) and continuation	X				Consequential to WRC-07 Agenda Item 1.14		WRC-07 Agenda Item 1.14

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of the distress and safety provisions in Appendix S13							
RESOLUTION 339 (Rev. WRC-03) Coordination of NAVTEX services			X				
RESOLUTION 340 (WRC-97) Need for additional search and rescue information in databases			X				
RESOLUTION 342 (Rev. WRC-2000) New technologies to provide improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service	X				Consequential to WRC-07 Agenda Item 1.14		WRC-07 Agenda Item 1.14
RESOLUTION 343 (WRC-97) Maritime certification for personnel of ship stations and ship earth stations for which a radio installation is not compulsory			X				
RESOLUTION 344 (Rev. WRC-03) Exhaustion of the maritime mobile service identity numbering resource					Pending decisions under agenda item 1.16		WRC-07 Agenda Item 1.16
RESOLUTION 345 (WRC-97) Operation of Global Maritime Distress and Safety System equipment on and assignment of maritime mobile service identities to non-compulsory fitted vessels			X				
RESOLUTION 349 (WRC-97) Operational procedures for cancelling false distress alerts in the			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
Global Maritime Distress and Safety System							
RESOLUTION 351 (WRC-03) Review of the frequency and channel arrangements in the MF and HF bands allocated to the maritime mobile service with a view to improving efficiency by considering the use of new digital technology by the maritime mobile service		X					WRC-07 Agenda Item 1.13
RESOLUTION 352 (WRC-03) Use of the carrier frequencies 12290 kHz and 16420 kHz for safety-related calling to and from rescue coordination centres			X				
RESOLUTION 353 (WRC-03) Maritime mobile service identities for equipment other than shipborne mobile equipment			X				WRC-07 Agenda Item 1.16
RESOLUTION 405 Relating to the use of frequencies of the aeronautical mobile (R) service	X						
RESOLUTION 413 (WRC-03) Use of the band 108-117.975 MHz by aeronautical services			X		May relate to decisions under WRC-07agenda item 1.6		
RESOLUTION 414 (WRC-03) Consideration of the frequency range between 108 Hz and 6 GHz for new aeronautical applications	X						WRC-07 Agenda Item 1.6
RESOLUTION 415 (WRC-03) Study of current satellite	X						WRC-07 Agenda Item 1.6

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
frequency allocations that will support the modernization of civil aviation telecommunication systems							
RESOLUTION 506 (Rev.WRC-97) Use by space stations in the broadcasting-satellite service operating in the 12 GHz frequency bands allocated to the broadcasting-satellite service of the geostationary-satellite orbit and no other			X				
RESOLUTION 507 (Rev. WRC-03) Relating to the establishment of agreements and associated plans for the broadcasting-satellite service			X				
RESOLUTION 517 (Rev. WRC-03) Transition from double-sideband to single-sideband or other spectrum-efficient modulation techniques in the high-frequency bands between 5 900 kHz and 26 100 kHz allocated to the broadcasting service					Pending decisions of WRC-07 under Agenda Item 1.13		
RESOLUTION 525 (Rev. WRC-03) Introduction of high-definition television (HDTV) systems of the broadcasting-satellite service (BSS) in the band 21.4-22.0 GHz in Regions 1 and 3			X				
RESOLUTION 526 (WARC-92)			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
Future adoption of procedures to ensure flexibility in the use of the frequency band allocated to the broadcasting-satellite service (BSS) for wide RF-band high-definition television (HDTV) and to the associated feeder links							
RESOLUTION 527 (WARC-92) Terrestrial VHF digital sound broadcasting	X						
RESOLUTION 528 (Rev. WRC-03) Introduction of the broadcasting-satellite service (sound) systems and complementary terrestrial broadcasting in the bands allocated to these services within the range 1-3 GHz	X						
RESOLUTION 533 (Rev. WRC-2000) Implementation of the decisions of the WRC-2000 relating to processing of proposed networks submitted under Articles 4, 6 and 7 of Appendices 30 and 30A to the Radio Regulations			X				
RESOLUTION 535 (Rev. WRC-03) Information needed for the application of Article 12 of the Radio Regulations			X				
RESOLUTION 536 (WRC-97) Operation of broadcasting satellites			X				



<b>RESOLUTION / RECOMMENDATION</b>	<b>S U P</b>	<b>M O D</b>	<b>N O C</b>	<b>N O C</b>	<b>NOTES</b>	<b>OTHER</b>	<b>BR and OTHER SOURCES</b>
serving other countries							
RESOLUTION 539 (Rev. WRC-03) Use of the band 2605-2655 MHz in certain Region 3 countries by non-geostationary satellite systems in the broadcasting-satellite service (sound)			X				
RESOLUTION 543 (WRC-03) Provisional RF protection ratio values for analogue and digitally modulated emissions in the HF broadcasting service				X			WRC-10 Agenda Item 2.6
RESOLUTION 544 (WRC-03) Identification of additional spectrum for the broadcasting service in the HF bands	X				Noting RRC issue		WRC-07 Agenda Item 1.13
RESOLUTION 545 (WRC-03) Technical and regulatory procedures relating to the broadcasting-satellite service networks operating in the 620-790 MHz band			X				WRC-07 Agenda Item 1.11
RESOLUTION 546 (WRC-03) Implementation of the decisions of WRC-03 relating to processing of networks under Appendices 30 and 30A of the Radio Regulations			X				
RESOLUTION 547 (WRC-03) Updating of the "Remarks" columns in the Tables of Article 9A of Appendix 30A and Article 11 of Appendix 30 in the Radio			X				

<b>RESOLUTION / RECOMMENDATION</b>	<b>S U P</b>	<b>M O D</b>	<b>N O C</b>	<b>N O C</b>	<b>NOTES</b>	<b>OTHER</b>	<b>BR and OTHER SOURCES</b>
Regulations							
RESOLUTION 548 (WRC-03) Application of the grouping concept in Appendices 30 and 30A in Regions 1 and 3			X				
RESOLUTION 608 (WRC-03) Use of the frequency band 1215-1300 MHz by systems of the radionavigation satellite service (space-to-Earth)			X				
RESOLUTION 609 (WRC-03) Protection of aeronautical radionavigation service systems from the equivalent power flux-density (epfd) produced by radionavigation-satellite service networks and systems in the 1164-1215 MHz frequency band					Further analysis needed		
RESOLUTION 610 (WRC-03) Coordination and bilateral resolution of technical compatibility issues for radionavigation-satellite service networks and systems in the bands 1164-1300 MHz, 1559-1610 MHz and 5010-5030 MHz					Further analysis needed		
RESOLUTION 641 (Rev.HFBC-87) Use of the frequency band 7 000-7 100 kHz			X				
RESOLUTION 642 Relating to the bringing into use of earth			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
stations in the amateur-satellite service							
RESOLUTION 644 (Rev.WRC-2000) Telecommunication resources for disaster mitigation and relief operations			X				
RESOLUTION 646 (WRC-03) Public protection and disaster relief			X				
RESOLUTION 670 (WRC-03) Notification and protection of earth stations in the meteorological-satellite service in the band 1670-1675 MHz					Further analysis needed		
RESOLUTION 703 (Rev. WRC-03) Calculation methods and interference criteria recommended by the ITU-R for sharing frequency bands between space radiocommunication and terrestrial radiocommunication services or between space radiocommunication services			X				
RESOLUTION 705 (Mob-87) Mutual protection of radio services operating in the band 70-130 kHz			?		Navy		
RESOLUTION 716 (Rev.WRC-2000) Use of the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz in all three Regions and			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
2 010-2 025 MHz and 2 160- 2 170 MHz in Region 2 by the fixed and mobile-satellite services and associated transition arrangements							
RESOLUTION 728 (Rev.WRC- 2000) Studies relating to consideration of allocations in the broadcasting band 470-862 MHz to non-geostationary mobile-satellite services	X						
RESOLUTION 729 (WRC-97) Use of frequency adaptive systems in the MF and HF bands	X						WRC-07 Agenda Item 1.13
RESOLUTION 731 (WRC-2000) Consideration by a future competent world radiocommunication conference of issues dealing with sharing and adjacent-band compatibility between passive and active services above 71 GHz			X				WRC-10 Agenda Item 2.7
RESOLUTION 732 (WRC-2000) Consideration by a future competent world radiocommunication conference of issues dealing with sharing between active services above 71 GHz			X				WRC-10 Agenda Item 2.7
RESOLUTION 734 (Rev. WRC- 03) Feasibility of use of high altitude platform stations in the	X						

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
fixed and mobile service in the frequency bands above 3 GHz allocated exclusively for terrestrial radiocommunication							
RESOLUTION 738 (WRC-03) Compatibility analyses between the Earth exploration-satellite service (passive) and active services	X				Consequential to WRC-07 Agenda Item 1.20		WRC-07 Agenda Item 1.20
RESOLUTION 739 (WRC-03) Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands			X		Consequential to WRC-07 Agenda Item 1.21		WRC-07 Agenda Item 1.21
RESOLUTION 740 (WRC-03) Future compatibility analyses between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands	X				Consequential to WRC-07 Agenda Item 1.21		WRC-07 Agenda Item 1.21
RESOLUTION 741 (WRC-03) Protection of the radio astronomy service in the band 4990-5000 MHz from unwanted emissions of the radionavigation-satellite service (space-to-Earth) operating in the frequency band 5010-5030 MHz			X				
RESOLUTION 742 (WRC-03) Use of the frequency band 36-37 GHz							WRC-07 Agenda Item 1.2
RESOLUTION 743 (WRC-			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
03) Protection of single-dish radio astronomy stations in Region 2 in the 42.5-43.5 GHz band							
RESOLUTION 744 (WRC-03) Sharing between the mobile-satellite service (Earth-to-space) and the space research (passive) service in the band 1668-1668.4 MHz and between the mobile-satellite service (Earth-to-space) and the fixed and mobile services in the band 1668.4-1675 MHz	X				Consequential to WRC-07 Agenda Item 1.7		WRC-07 Agenda Item 1.7
RESOLUTION 745 (WRC-03) Protection of existing services in all Regions from non-geostationary-satellite networks in the fixed-satellite service using the frequency bands around 1.4 GHz on a secondary basis	X				Consequential to WRC-07 Agenda Item 1.17		WRC-07 Agenda Item 1.17
RESOLUTION 746 (WRC-03) Issues dealing with allocations to science services	X				Consequential to WRC-07 Agenda Item 1.2		WRC-07 Agenda Item 1.2
RESOLUTION 747 (WRC-03) Possible upgrade of the radiolocation service to primary allocation status in the frequency bands 9000-9200 MHz and 9300-9500 MHz, and possible extension of the existing primary allocations to the Earth exploration-satellite service (active) and the space research service (active) in the band	X						WRC-07 Agenda Item 1.3

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
9500-9800 MHz							
RESOLUTION 802 (WRC-03) Agenda for the 2007 World Radiocommunication Conference	X						
RESOLUTION 803 (WRC-03) Preliminary Agenda for the 2010 World Radiocommunication Conference							WRC-07 Agenda Item 7.2
RESOLUTION 900 (WRC-03) Review of the Rule of Procedure for No. 9.35 of the Radio Regulations					Abrogate?		
RESOLUTION 901 (WRC-03) Determination of the orbital arc separation for which coordination would be required between two satellite networks operating in a space service not subject to a Plan			X		Pending decisions under WRC-07 Agenda Item 1.12		
RESOLUTION 902 (WRC-03) Provisions relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5925-6425 MHz and 14-14.5 GHz			X				
RESOLUTION 950 (WRC-03) Consideration of the use of the frequencies between 275-3000 GHz		X					WRC-10 Agenda Item 2.2
RESOLUTION 951 (WRC-03) Options to improve the international spectrum regulatory framework			X				

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RESOLUTION 952 (WRC-03) Studies regarding devices using ultra-wideband technology	X						
RECOMMENDATION 7 (Rev.WRC-97) Adoption of standard forms for ship station and ship earth station licences and aircraft station and aircraft earth station licences			X				
RECOMMENDATION 8 Relating to automatic identification of stations			X				
RECOMMENDATION 9 Relating to the measures to be taken to prevent the operation of broadcasting stations on board ships or aircraft outside national territories			X				
RECOMMENDATION 14 (Mob-87) Identification and location of special vessels, such as medical transports, by means of standard maritime radar transponders	X						
RECOMMENDATION 34 (WRC-95) Principles for allocation of frequency bands			X				
RECOMMENDATION 36 (WRC-97) Role of international monitoring in reducing apparent	X						



RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
congestion in the use of orbit and spectrum resources							
RECOMMENDATION 37 (WRC-03) Operational procedures for earth stations on board vessels (ESVs) use			X				
RECOMMENDATION 63 Relating to the provision of formulae and examples for the calculation of necessary bandwidths			X		Further analysis may be appropriate		
RECOMMENDATION 71 Relating to the standardization of the technical and operational characteristics of radio equipment			X				
RECOMMENDATION 75 (WRC-03) Study of the boundary between the out-of-band and spurious domains of primary radars using magnetrons			X				
RECOMMENDATION 100 (Rev. WRC-03) Preferred frequency bands for systems using tropospheric scatter			X				
RECOMMENDATION 104 (WRC-95) Development of power flux-density and equivalent isotropically radiated power limits to be met by feeder links of non-geostationary satellite networks in the mobile-satellite service for the			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
protection of geostationary-satellite networks in the fixed-satellite service in bands where No. S22.2/2613 of the Radio Regulations applies							
RECOMMENDATION 316 (Rev.Mob-87) Use of ship earth stations within harbours and other waters under national jurisdiction			X				
RECOMMENDATION 318 (Mob-87) Improved efficiency in the use of the Appendix S18/18 VHF frequency spectrum for maritime mobile communications			X				
RECOMMENDATION 401 Relating to the efficient use of aeronautical mobile (R) worldwide frequencies			X				
RECOMMENDATION 503 (Rev.WRC-2000) High-frequency broadcasting					Further analysis pending WRC-07 decisions under agenda item 1.13		
RECOMMENDATION 506 Relating to the harmonics of the fundamental frequency of broadcasting-satellite stations			X				
RECOMMENDATION 517 (Rev. WRC-03) Relative RF protection ratio values for single-sideband (SSB) emissions in the HF bands	X				Pending decisions of WRC-07 under agenda item 1.13		

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
allocated exclusively to the broadcasting service							
RECOMMENDATION 520 (WARC-92) Elimination of HF broadcasting on frequencies outside the HF bands allocated to the broadcasting service	X						
RECOMMENDATION 522 (WRC-97) Coordination of high- frequency broadcasting schedules in the bands allocated to the broad- casting service between 5 900 kHz and 26 100 kHz			X				
RECOMMENDATION 604 (Rev.Mob-87) Future use and characteristics of emergency position-indicating radiobeacons (EPIRBs)	X						
RECOMMENDATION 605 (Rev.Mob-87) Technical characteristics and frequencies for shipborne transponders			X				
RECOMMENDATION 606 (Mob- 87) The possibility of reducing the band 4 200-4 400 MHz used by radio altimeters in the aeronautical radionavigation service	X						
RECOMMENDATION 608 (WRC-03) Guidelines for					Further analysis needed		

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consultation meetings established in Resolution 609 (WRC-03)							
RECOMMENDATION 622 (WRC-97) Use of the frequency bands 2 025-2 110 MHz and 2 200- 2 290 MHz by the space research, space operation, Earth exploration- satellite, fixed and mobile services			X				
RECOMMENDATION 705 Criteria to be applied for frequency sharing between the broadcasting- satellite service and the terrestrial broadcasting service in the band 620-790 MHz			X				
RECOMMENDATION 707 Relating to the use of the frequency band 32-33 GHz shared between the inter-satellite service and the radionavigation service					Further analysis needed		
RECOMMENDATION 722 (WRC-03) Review of technical, operational and frequency issues for terrestrial wireless interactive multimedia applications on a global basis	X						WRC-10 Agenda Item 2.8
RECOMMENDATION 723 (WRC-03) Spectrum usage and operational characteristics of electronic news gathering systems	X						
RECOMMENDATION 800 (WRC-03) Principles for establishing agendas for world				X			

RESOLUTION / RECOMMENDATION	S M N			U O N			NOTES	OTHER	BR and OTHER SOURCES
	P	D	C	C	C	C			
radiocommunication conferences									

**DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE**

**Agenda Item 7.2:** to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution **802 (WRC-03)**,

**Background Information:** At WRC-2003, a primary space research service (space-to-Earth) allocation in the band 25.5-27.0 GHz was added to the Table of Allocations to support a wide range of space research missions.

It is envisioned that future exploration missions to the Moon and Mars will be robotic for the foreseeable future and manned in the long-term. Prior to 2015, there will be extensive robotic missions, examining the lunar terrain, environment and potential landing sites.

To support the SRS missions in near Earth orbit, including missions in transit to the moon and at or near the moon, downlink (space-to-Earth) transmissions will operate in the 25.5-27.0 GHz SRS allocation. This 1.5 GHz wide downlink band will be used for both scientific data retrieval and voice/video communication with the Earth.

However, there is a need for a companion uplink (Earth-to-space) band to provide the mission data, command and control links for these missions. Due to the potential for many concurrent exploration related systems and the large bandwidth requirements of these systems, especially those supporting manned missions, it is envisioned that a total uplink bandwidth of up to 500 MHz will be needed.

The 22.55-23.55 GHz band is used by tracking and data relay satellite systems to communicate with user satellites (forward links) via an existing primary inter-satellite service allocation. These forward links are paired with inter-satellite return links in the 25.25-27.5 GHz band. In addition, the 22.55-23.55 GHz band is both far enough from the 25.5-27.0 GHz band to provide adequate frequency separation and wide enough to accommodate a 500 MHz sub-band, while allowing adequate bandwidth to protect existing systems. Thus the 22.55-23.55 GHz band is the logical companion band to provide the necessary uplink bandwidth and by using the same band as for communication in the Earth-to-space direction, it provides a degree of redundancy and coverage that may prove vital for future missions.

**Proposal:**

**USA/ / 1 MOD**

**RESOLUTION 803 (WRC-~~03~~07)**

**~~Preliminary~~ Agenda for the 2010 World Radiocommunication Conference**

The World Radiocommunication Conference (Geneva, 20037),

**USA/ / 2 ADD**

**2.XB** to consider the addition of up to a 500 MHz primary space research service (Earth-to-space) allocation in the 22.55-23.55 GHz band, taking into account the results of ITU-R studies and recognizing the need to protect existing systems in the band.

**Reasons:** Allocating sufficient primary space research service frequency spectrum in the 22.55-23.55 GHz band will provide the space exploration initiatives adequate uplink (Earth-to-space) bandwidth capacity in a band that is linked for the inter-satellite service and thus is a reasonable companion to the primary space research service 25.5-27.0 GHz space-to-Earth band.

**USA/ / 3 ADD**

**RESOLUTION USXXX (WRC-07)**

**Use of the Band 22.55-23.55 GHz by the Space Research Service**

The World Radiocommunication Conference (Geneva, 2007),

*considering*

- a) that there is growing interest by space agencies around the World in the comprehensive exploration of the Moon;
- b) that the lunar exploration missions, examining the terrain, environment and potential landing sites, will be robotic for the foreseeable future and manned in the long-term;
- c) that a primary space research service (space-to-Earth) allocation in the band 25.5-27.0 GHz was added to the Table of Allocations to support a wide range of space research missions;
- d) that space research service (space-to-Earth) transmissions in the 25.5-27.0 GHz band will be used to support space research service missions in near Earth orbit, including missions in transit to the moon and at or near the moon;
- e) that the space research service (space-to-Earth) transmissions in the 25.5-27.0 GHz band will be used for both scientific data retrieval and voice/video communication with the Earth;
- f) that there is a need for a companion uplink space research service (Earth-to-space) band to provide the mission data, command and control links for the lunar exploration missions;
- g) that due to the potential for many concurrent exploration related systems and the large bandwidth requirements of these systems, especially those supporting manned missions, it is

envisioned that a total uplink bandwidth of up to 500 MHz will be needed;

*h) that the 22.55-23.55 GHz band is both far enough from the 25.5-27.0 GHz band to provide adequate frequency separation and wide enough to accommodate a 500 MHz sub-band, while allowing adequate bandwidth to protect existing systems;*

*i) that the 22.55-23.55 GHz band is used by tracking and data relay satellite systems to communicate with user satellites (forward links) via the existing primary inter-satellite service allocation;*

*j) that the 22.55-23.55 GHz band is the logical companion band to provide the necessary uplink bandwidth and by using the same band as for communication in the Earth-to-space direction, it provides a degree of redundancy and coverage that may prove vital for future missions;*

*recognizing*

1 that the band 22.55-23.55 GHz is allocated to the fixed, inter-satellite and mobile services;

2 that the inter-satellite forward links in the 22.55-23.55 GHz band are paired with inter-satellite return links in the 25.25-27.5 GHz band;

3 that sharing between space research service (Earth-to-space) and the fixed, inter-satellite and mobile services may be feasible in the band 22.55-23.55 GHz;

*resolves*

1 to invite ITU-R to conduct sharing analyses between space research service systems operating in the Earth-to-space direction and the fixed, inter-satellite and mobile services in the band 22.55-23.55 GHz to define appropriate sharing criteria with a view to allocating up to 500 MHz in the band 22.55-23.55 GHz for the space research service in the Earth-to-space direction;

2 to recommend that WRC-10 review the results of the studies under *resolves* 1 and consider the inclusion of the sharing criteria within the Radio Regulations and appropriate modifications to the Table of Frequency Allocations, based on proposals from administrations;

*invites administrations*

to contribute to the sharing studies between the space research service and the fixed, inter-satellite and mobile services in the 22.55-23.55 GHz band;

*invites ITU-R*



to complete the necessary studies, as a matter of urgency, taking into account the present use of the allocated band, with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Conference;

*instructs the Secretary-General*

to bring this Resolution to the attention of the international and regional organizations concerned.

**Reasons:** Consequential change required by the addition of new agenda item 2.XB to the Agenda for WRC-10.

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**Document WAC/078(25.01.06) – Proposal 2:**

#### **DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE**

**Agenda Item 7.2** to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution 802 (WRC-03),

**Background Information:** In the Preliminary Agenda for WRC-2010, agenda item 2.2 states: “to consider frequency allocations between 275 GHz and 3 000 GHz taking into account the result of ITU-R studies in accordance with Resolution 950 (WRC-03);”

Studies in the ITU-R, most notably WP1A, WP3J, WP3M, WP4A, WP7B, WP7C, WP7D, WP8A, WP9B, have very clearly identified the interest within the active and passive services in using frequencies in the spectral region above 275 GHz. Resolution 950 (WRC-03) has allowed for the submission of details on systems operating in this range into the Master International Frequency Register (MIFR). However, there is no registered use to date by any of the active services. On the other hand, the radio astronomy, Earth exploration-satellite (passive) and the space research (passive) services all make extensive use of this spectral region. Within the radio astronomy service, several administrations have already made significant infrastructure investments in radio astronomy sites around the world. This extensive use of this spectral region by the passive services along with the lack of use of the same by the various active services indicates that the general consideration of frequency allocations between 275 and 3000 GHz is premature and such consideration would likely take up a great deal of resources in preparing for the 2010 Conference. As an alternative, reviewing and revising No. 5.565 would be desirable while at the same time require far less preparation by administrations for the 2010 Conference.

**Proposal:**

**USA/ /1 MOD**

**RESOLUTION 803 (WRC-0307)**

## **Preliminary Agenda for the 2010 World Radiocommunication Conference**

The World Radiocommunication Conference (Geneva, 2003~~7~~),

**USA/ / 2 SUP**

~~2.2 to consider frequency allocations between 275 GHz and 3 000 GHz taking into account the result of ITU-R studies in accordance with Resolution 950 (WRC-03);~~

**USA/ / 3 ADD**

**2.X** to review and revise No. 5.565 with a view to identifying additional frequencies for passive services in the spectral region from 275 – 3000 GHz, taking into account the results of ITU-R studies in accordance with Resolution 950.

**Reasons:** The extensive use of this spectral region by the passive services along with the lack of use of the same by the various active services indicates that the general consideration of frequency allocations between 275 and 3000 GHz is premature and such consideration would likely take up a great deal of resources in preparing for the 2010 Conference. As an alternative, reviewing and revising No. 5.565 would be desirable while at the same time require far less preparation by administrations for the 2010 Conference.

**USA/ / 4 MOD**

### **RESOLUTION 950 (WRC-03~~07~~)**

#### **Consideration of the use of the frequencies between 275 and 3 000 GHz**

The World Radiocommunication Conference (Geneva, 2003),

*considering*

- a) that, in the Table of Frequency Allocations, frequency bands above 275 GHz are not allocated;
- b) that, notwithstanding *considering a)*, No. 5.565 makes provision for the use of the frequency band 275-1 000 GHz for the experimentation with, and development of various passive services and all other services and recognizes the need to conduct further experimentation and research;
- c) that No. 5.565 also makes provision for the protection of passive services until, and if, such time as the Table of Frequency Allocations may be extended;
- d) that, in addition to the spectral lines identified by No. 5.565, research activities in the bands above 275 GHz may yield other spectral lines of interest, such as those listed in Recommendation ITU-R RA.314;
- e) that within various Radiocommunication Study Groups, studies on systems between 275 and 3 000 GHz, including system characteristics of suitable applications, are being considered;
- f) that the present use of the bands between 275 and 3 000 GHz is mainly related to the passive services, however, with anticipated technology development, the bands may become increasingly important for suitable active service applications;

g) that sharing studies in ITU-R among passive services and all other services operating in frequencies between 275 and 3 000 GHz have not been completed,  
*recognizing*

c) that propagation characteristics at frequencies above 275 GHz, such as atmospheric absorption and scattering, have a significant impact on the performance of both active and passive systems and need to be studied;

d) that it is necessary to investigate further the potential uses of the bands between 275 and 3 000 GHz by suitable applications,

*noting*

a) that significant infrastructure investments are being made under international collaboration for the use of these bands between 275 and 3 000 GHz, for example, the Atacama Large Millimetre Array (ALMA), a facility under construction that will provide new insights on the structure of the universe;

b) that Radiocommunication Bureau Circular Letter CR/137 identified additional information for the Bureau to record characteristics of active and passive sensors for Earth exploration-satellite service and space research service satellites, in frequency bands below 275 GHz,

*further noting*

a) that a process and format similar to that provided in *noting b)* could be used to record systems operating in the 275 to 3 000 GHz band;

b) that recording active and passive systems operating in the 275 to 3 000 GHz band will provide information until the date when, and if, it is determined that changes to the Radio Regulations are needed,

*resolves*

~~1 — to consider at WRC-10 frequency allocations between 275 GHz and 3 000 GHz taking into account the result of the ITU-R studies;~~

2 that administrations may submit for inclusion in the Master International Frequency Register details on systems which operate between 275 and 3 000 GHz and which may be recorded by the Radiocommunication Bureau under Nos. 8.4, 11.8 and 11.12,

*invites ITU-R*

to conduct the necessary studies in time for consideration by WRC-10 with a view to the modification of No. 5.565 ~~or the possible extension of the Table of Frequency Allocations above 275 GHz, including advice on the applications suitable for such bands,~~

*instructs the Director of the Radiocommunication Bureau*

to accept submissions referred to in *resolves-2*, and to record them in the Master International Frequency Register.

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